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EXAMINER

WALLACE, SCOTT A

ART UNIT PAPER NUMBER

2671

DATE MAILED: 02/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/749,624

Applicant(s)

FUJIWARA ET AL.

Examiner

Scott Wallace

Art Unit

2671

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claim 8 at line 4 recites the limitation "the second order differentiation". There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 10-12 and 17-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Nagakura, U.S. Patent No. 6,337,685.
5. As per claims 10 and 17, Nagakura discloses a processing method of a three-dimensional shape data, comprising the steps of: displaying a three-dimensional shape model and a surface to be joined to the three-dimensional shape model (column 1 lines 38-60), a shape of the surface is defined by at least one parameter (radius, column 2 lines 23-35 and column 7 lines 10-22); obtaining only one value of the at

least one parameter; and modifying the displayed surface based on the obtained value of the parameter (column 2 lines 23-35 and column 7 lines 10-22).

6. As per claims 11 and 18, Nagakura discloses wherein the obtaining of a parameter value is performed manually by a manual operation of a user for fixing the parameter value, and by a manual operation of a user for applying the fixed parameter value onto a modification (column 7 lines 10-22).

7. As per claims 12 and 19, Nagakura discloses wherein the obtaining of a parameter value is performed manually by a manual operation of a user for fixing the parameter value, and applying the fixed parameter value onto a modification is not necessary (column 7 lines 10-22).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-8 and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stewart et al., U.S. Patent No. 5,731,816 in view of Nagakura, U.S. Patent No. 6,337,685.

10. As per claim 1, Stewart et al discloses a processing method to be implemented by a computer, comprising the steps of: obtaining three-dimensional shape data representing a three-dimensional model (fig 3); receiving a designation of a portion (fig 3 # 72) required to be corrected of the three-dimensional shape model (column 1 lines 20-35 and 56-63); displaying a surface (fig 2) to be joined to the designated portion; modifying a shape of the surface according to an alteration of a parameter with regard to the

shape of the surface (column 2 lines 5-14). However Stewart et al does not specifically disclose redisplaying the modified surface in response to reception of alteration. This is disclosed in Nagakura in column 1 lines 49-60 and column 7 lines 10-22. It would have been obvious to one of ordinary skill in the art at the time the invention was made to redisplay the modified portion because both inventions deal with filleting an image in a design program (CAD) to allow the user to see the results to verify the modification as compared to the portion that needed correction.

11. As per claim 2, Nagakura discloses wherein the surface (cylindrical shape) is displayed on the designated portion (edge) together with the three-dimensional shape model (column 7 lines 10-22 and fig 11).

12. As per claim 3, Nagakura discloses wherein the alteration of a parameter (radius) is executed by a manual operation of a user and the altered parameter is applied to a modification in the modifying step (column 7 lines 10-22).

13. As per claim 4, Nagakura discloses wherein the alteration of a parameter is performed manually by a single operation of a user for fixing the parameter to be applied to a modification in the modifying step (column 7 lines 10-22).

14. As per claim 5, Nagakura discloses wherein the shape of the surface corresponds to a shape of the designated portion with regard to any altered parameter (column 7 lines 10-22).

15. As per claim 6, Nagakura discloses wherein the shape of the surface is determined based on data which represents a periphery of the designated portion in the three-dimensional shape model (column 7 lines 10-22).

16. As per claim 7, Stewart et al discloses wherein the surface contains a plurality of points having a fixed position with reference to the X-axis direction and Y-axis direction (column 3 lines 31-39 and fig 11), and the modifying step includes modifying a position with reference to the Z-axis direction of at least one of the plurality of points based on the altered parameter (column 3 lines 31-39 and fig 11).

17. As per claim 8, Stewart et al discloses wherein the modifying step includes determining a position with reference to the Z-axis direction of at least one of the plurality of points so as to minimize a sum up to the second order differentiation (column 18 lines 18) among the plurality of points on the boundary condition of three-dimensional shape data of a periphery of the designated portion (column 8 lines 65-67 and column 9 lines 1-25).

18. As per claim 9, Stewart et al discloses wherein a first order differential coefficient and a second order differential coefficient of the second order differentiation are positive numbers and a sum of them is equal to 1, and the parameter is one of the first order differential coefficient on the second order differential coefficient (column 4 lines 44-67).

19. As per claim 13, Stewart et al discloses a computer program provided as a user interface of a computer system for processing a three-dimensional shape model, wherein the computer program makes the computer system execute each step described in claim 1 (column 1 lines 5-8).

20. As per claim 14, Nagakura discloses a computer program provided as a user interface of a computer system for processing a three-dimensional shape model, wherein the computer program makes the computer system execute each step described in claim 2 (column 1 lines 38-47).

21. As per claim 15, Nagakura discloses discloses a computer program provided as a user interface of a computer system for processing a three-dimensional shape model, wherein the computer program makes the computer system execute each step described in claim 3 (column 1 lines 38-47).

22. As per claim 16, Nagakura discloses a computer program provided as a user interface of a computer system for processing a three-dimensional shape model, wherein the computer program makes the computer system execute each step described in claim 4 (column 1 lines 38-47).

***Specification***

23. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: In claim 9, "the parameter is one of the first order differential coefficient on the second order differential coefficient".

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Scott Wallace** whose telephone number is **703-605-5163**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Mark Zimmerman**, can be reached at 703-305-9798.

**Any response to this action should be mailed to:**


Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

  
MARK ZIMMERMAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600